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ABSTRACT

This entire report is in outline form and begins with short paragraphs from seven social analysts predicting the future. The next section contains predictions on the long-range future of American society with implications for professional education programs from eight scientists. The third section, predictions of the long-range future of professional education programs, consists of lists under the headings of professional roles, and preparation emphases. The final section explains long-range planning and lists a sequence of events in planning for long-range planning. (MLF)

The Next 25 Years:

Long Range Planning

for the Development of

Professional Education Programs

1976-2001

A Report

for Education Redesign

Prepared by the Long Range Planning Committee

Ron Roy Cote, Chairman

for the

Research, Evaluation and Development Council of the College of Education

Bowling Green State University

Spring, 1976

RATIONALE

I. An increasing number of social analysts are describing the characteristics ~~of a basically~~ new form of society. Various terms are used to label this era which succeeds the Industrial.

A. In The Cybernetic Revolution, Rose (1974) states: "The history of mankind in the last ten thousand years shows three transitions which have been of fundamental importance as regards economic, social and scientific development. These transitions are known as the Agricultural, First Industrial and Second Industrial Revolutions; the First Industrial Revolution is also termed the Age of Mechanization, while the second is usually called the Age of Automation or the Cybernetic Revolution."

B. Bell (1973) in The Coming of Post-Industrial Society, analyzes the new society: "Its meaning can be more easily understood if one specifies five dimensions, or components of the term:

1. Economic sector: the change from goods-producing to a service economy;
2. Occupational distribution: the pre-eminence of the professional and technical class;
3. Axial principal: the centrality of theoretical knowledge as the source of innovation and of policy formulation for the society;
4. Future orientation: the control of technology and technological assessment;
5. Decision-making: the creation of the new intellectual technology."

C. Gabor (1963) claims that "the electronic stage...is clearly distinct. Before, the arrival of electronics

technology amplified the muscular power of man; now it is about to create artificial nervous systems. Electronics has started amplifying intelligence in the sense of enormously speeding up simple mental operations and is now proceeding to less simple ones."

D. Ayres (1969) points out that "one can find example after example to show that the rate of person-to-person information flow is increasing far faster than population, energy consumption, gross national product, or virtually any other major socioeconomic parameter. In some ways this is the central fact of our times."

E. McLuhan (1967):

> "There is a world of difference between the modern home environment of integrated electric information and the classroom. Today's television child is attuned to up-to-the-minute 'adult' news - inflation, rioting, war, taxes, crime, bathing beauties - and is bewildered when he enters the nineteenth century environment that still characterizes the educational establishment where information is scarce but ordered and structured by fragmented, classified patterns, subjects, and schedules. It is naturally an environment much like any factory set-up with its inventories and assembly lines."

F. Drucker (1968) claims that major discontinuities rather than the massive momentum of apparent trends are likely to shape the remaining decades of this century. His fourth and last discontinuity: "But the most important of the changes is the last one. Knowledge, during the last few decades, has become the central capital, the cost center, and the crucial resource of the economy. This changes labor forces and work, teaching and

learning, and the meaning of knowledge and its politics. But it also raises the problem of the new men of power, the men of knowledge."

G. Glasser (1972) developed one of McLuhan's concepts: "He implies that recently something new has happened, that the struggle for a goal - a profession, a diploma, a home, a family - has been superceded by the struggle to find oneself as a human being... Unlike goals, which vary widely, role, or, as I prefer to call it, identity, is about the same for all people: everyone aspires to be a happy, successful, pleasurable belief in himself. Role, or identity, is now so important that it must be achieved before we set out to find a goal. We can no longer afford to ignore this new priority in human motivation. Institutions that ignore the new motivational sequence - role before goal - will fail."

II. Predictions on the Long Range Future of American Society with Implications for Professional Education Programs (Wallechinsky and Wallace, 1975):

A. Daniel Bell, Professor of Sociology, Harvard

1. Society will be more fragile with greater hostility and polarization.
2. Society will be in a postindustrial stage:
   - the economy will be based on services rather than on goods

- information will be centralized and accessible for innovation and policy formation
- power will reside in intellectual institutions such as universities rather than in industries
- individuals will have greater autonomy
- a more hedonistic culture will be distrustful of the achievement based technological world

B. James Bonner, Professor of Biology, CIT

1. The brain code will be broken.
2. There will be 3.3 million engineers and scientists in the U.S. in 2000 but the need will be three times that.
3. It may be possible to replace the 100,000 brain neurons that die everyday through synthesis of new cells.

C. D. G. Brennan, Mathematician, Hudson Institute

1. Computers as sophisticated as the human brain will be small enough to carry in a shoe box.
2. An infrared holographic laser will provide 3-dimensional spatial information.

D. Charles DeCarlo, Mathematician, IBM

1. Laser holography will provide total sensory information enabling an individual to learn about almost anything from a small portable unit.
2. A common language will be developed.

3. Computers will become smaller yet hold far more information and achieve greater speed in logical functions, a real advantage to medicine and education.

E. Gerald Feinberg, Professor of Physics, Columbia

1. It will be possible to tinker with the brain to make human memory more reliable and accessible at the expense of breadth in sensory responses.
2. Humans will be able to reach new levels of consciousness, to control creative processes, to perceive logic in a direct way.

F. John McHale, formerly Executive Director of World Resources Inventory at S. Illinois University

1. It will be possible to put handwritten manuscript information into computers.
2. It will be possible to put information into a computer verbally.
3. Three dimensional television will be developed.
4. Home video-computers will become available.

G. Margaret Mead, Anthropologist

1. We will probably live in a culture in which the old learn from the young.
2. We must discover educational processes that will keep the future open, so that children will learn how to learn and discover the value of commitment,

rather than be told what to learn or be committed to.

3. Elders will need the experiential awareness of the young as a basis for planning.

4. The young must be allowed to participate directly.

H. I. DeSola Pool, Professor of Political Science, MIT

1. Information technology will make possible indices of everything such as public happiness according to race, sex and age; and reports of levels of public awareness.

2. Information on the brain will increase: cognition, memory, associations, categorization.

3. Educational technology will be extremely sophisticated.

4. Computers will construct sentences in answer to verbal questions, and will translate languages.

5. It will be possible to determine specifically the effects of family, genetic inheritance, and parental treatment on the individual child.

6. Sophisticated information systems will make it possible to experiment on-line with alternative strategies by means of simulation models.

III. Predictions on the Long Range Future of Professional Education Programs:

A. Professional Roles (Burdin, 1975)

1. Values developers

2. Resource finders

3. Learning diagnosticians

4. Prescription specialists

5. Interdisciplinary liaison specialists

6. Human relations developers

7. Career and leisure counselors

8. Community learning facilitators

9. Profession builders

10. Utilizers of futuristic processes and substance

11. Learning specialists

B. Preparation Emphases (Shane, 1975)

1. Study of the future

2. Internationalism

3. Early preservice experiences

4. Increased competence

5. Personalized guidance

6. Community involvement

7. Action and service learning

8. Cultural pluralism

9. Lifelong learning

10. Diagnostic abilities

11. Different staff deployment

AN EXPLANATION OF LONG RANGE PLANNING

I. Time span: "anything in excess of fifteen to twenty-five years (Candoli, 1973, 17)."

A. Short range: 1-10 years (overlap is

B. Middle range: 5-20 due to variation

C. Long range: 15-20 and over by authors)

II. "...long-range planning (is) that which forces the planning group to consider alternatives not presently utilized and to develop approaches not yet a part of the educational system. This could mean, in terms of time, any period in the future that, given present planning capability, can be projected or hypothesized (Candoli, 1973, 17)."

III. A constant activity due to:

A. Changing variables

B. External forces

PLANNING FOR LONG RANGE PLANNING: A SEQUENCE OF EVENTS

I. Ascertain long range predictions affecting preparation programs in professional education.

A. Review and summarize predictions

B. Conduct a Delphi or similar study

II. Design an Assessment Inventory based on the above predictions.

III. Administer the Assessment Inventory as a systematic program evaluation instrument.

IV. Develop long range program objectives based on the results of the assessment.

V. Determine priority of preferable objectives

A. Values clarification technique indicates:

B. Consensus technique indicates:

C. Policy determination

(Possible and probable alternatives are retained as such.)

VI. Develop intermediate objectives

A. PERT or similar technique indicates:

B. Scenario of intermediate phases and alternatives

VII. Design phase one systematically (the next five years):

A. Requirements:

1. faculty and administration (required competencies)

2. students (anticipated needs)

3. spaces

4. equipment and materials

B. Process:

1. organization of requirements for operation

2. procedures to attain objectives

3. evaluation of organization and procedures in operation

4. information system

C. Results:

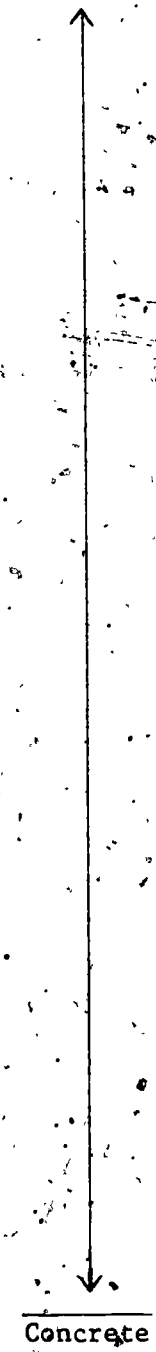
1. evaluation of phase one: attainments/objectives

2. evaluation of cost and alternative processes

3. recommendations for next phase

VIII. Refine phase two

A SAMPLE SCENARIO OF PROFESSIONAL EDUCATION PROGRAMS IN TWENTY-FIVE YEARS



Function / Population	Spaces / Activities
Research	Project rooms, conference rooms
Faculty, Graduate Residents	Construction of original models, systems
Development	Project rooms, seminar rooms
Faculty, Graduate Residents	Construction of programs, plans, simulations
Dissemination	Offices, carrels, seminar rooms
Faculty, Graduate, Majors	Presentations, critique
Demonstration	Laboratories, clinics, offices, carrels
Faculty, Graduates, Majors, Practitioners	Diagnosis, presentation evaluation
Extension	Centres, offices
Administration, Practitioners	Advisement, contracting, demonstration

This scenario invents one possible future for the College of Education. Its purposes are heuristic. It locates functions on a continuum from abstract, through increasingly applied functions, to practical applications for visiting practitioners.

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